

Flood Preparedness and Mitigation Guide

Schultz Flood Hotline: (928) 679-8390 Schultz Flood Email: schultzmitigation@coconino.az.gov
Schultz Flood Webpage: <http://www.coconino.az.gov/index.aspx?NID=641>



Restore. Revive. Renew.
Through Partnership

SCHULTZ COMMUNITY RECOVERY

THE RISK IS REAL.
Purchase or
renew your flood
insurance now.



National Flood Insurance Program Reform: WHAT YOU NEED TO KNOW!

In 2012, Congress passed the Biggert Waters Flood Insurance Reform Act, which calls on the Federal Emergency Management Agency (FEMA) and other agencies to make a number of changes to the National Flood Insurance Program (NFIP). Some of these changes have already been put in place, and others will be implemented in the coming months. Key provisions of this legislation require the NFIP to raise rates to reflect true flood risk, make the program more financially stable, and change how Flood Insurance Rate Map (FIRM) updates impact policyholders. The Act also calls for a phase-out of "grandfathered" rates and a move to risk-based rates for most properties when the community adopts a new Flood Insurance Rate Map. These changes will mean premium rate increases for some – but not all – policyholders over time. To learn more, please visit <http://www.fema.gov/national-flood-insurance-program/flood-insurance-reform-act-2012>.

Who should have flood insurance?

Everyone should have flood insurance in the Schultz Flood area irrespective of flood risk. Maps and models are not perfect. This includes areas in and near Doney Park. Flood insurance is the only way to protect your investments.

How do I purchase flood insurance?

A separate flood insurance policy through the National Flood Insurance Program (NFIP) covers damage to your home and belongings caused by flooding. If your insurance agent is not aware of the procedures for selling flood insurance policies, then please call **1-800-720-1093** for a referral. You can also find a local insurance agent at www.floodsmart.gov. **When purchasing a flood insurance policy, there is a 30-day waiting period for coverage to become effective.**

Dear Schultz Flood Area Property Owner,

Summer 2013

Thank you for your interest in the 2013 *Flood Preparedness & Mitigation Guide*. This year's Guide highlights the many Schultz Flood mitigation projects that are currently under construction, which represent over a \$7 million investment in flood mitigation. In addition, the Guide continues to offer flood preparation guidelines and resources to help keep you and your family aware, informed and safe during the monsoon season.

Over the last three years, the County and its partners have made great strides towards developing long-term mitigation for the Schultz Flood area. To date, approximately \$11.8 million in flood mitigation funding has been secured through the Natural Resources Conservation Service's (NRCS) Emergency Watershed Protection (EWP) program and the Coconino County Flood Control District (CCFCD). Although more remains to be done, we are very pleased to have overcome many challenges and now be in construction on two EWP projects. In addition, the County has secured and matched over \$1.5 million in Federal Emergency Management Agency (FEMA) funding.

This year the *Guide* highlights the first two EWP projects to break ground in the Schultz Flood area – the Brandis/Thames and Wupatki Trails/Lenox projects. Also featured in the *Guide* are several other flood mitigation and drainage projects and an overview of flood mitigation measures completed during 2012.

Perhaps most importantly, the 2013 *Guide* offers vital information regarding imminent changes to the FEMA's National Flood Insurance Program (NFIP). Because these changes will affect existing flood insurance policy provisions and future NFIP rates, this section is required reading for everyone in the Schultz Flood area (see column to the left).

Please know that Coconino County continues to stand with you and is working hard on your behalf. We thank you for your continuing cooperation and hope you find the information in this *Guide* valuable and supportive as we continue to develop flood mitigation measures in the Schultz Flood area. Additional information is also available on the Schultz Flood Webpage.

Sincerely,

Elizabeth "Liz" Archuleta, Chairwoman
Coconino County Board of Supervisors
District 2 Supervisor

Mandy Metzger
District 4 Supervisor

Why should I purchase a flood insurance policy since the Federal Emergency Management Agency (FEMA) makes disaster assistance available after a flood?

As we experienced, an area only qualifies for Individual Assistance if a high number of homes are destroyed during a disaster. Although

declared a federal disaster by the President, the Schultz flooding did not qualify for Individual Assistance and thus no federal assistance was provided to individual homeowners. Federal flood insurance claims are paid even if the President does not declare a disaster.

For more information call the National Flood Insurance Program at 1-800-720-1093 or visit www.floodsmart.gov.



Emergency Watershed Protection Projects Break Ground!

2013 has already been a very active year for Emergency Watershed Protection (EWP) projects in the Schultz Flood area. This spring, Coconino County broke ground on the area's first EWP projects – Brandis Way and Wupatki Trails.

The EWP program funding supports the construction of long-term flood mitigation measures that help to reduce risks to life,

property and public infrastructure in flood affected communities. To date, the County has secured more than \$11.8 million in EWP funding from the NRCS and the Coconino County Flood Control District (CCFCD) to engineer and construct on- and off-forest measures in the Schultz Flood area.

Developing EWP projects is a very complex process. Each project

must be tailored to the specific technical challenges presented by each flood corridor and created with the support and participation of property owners, agency partners, and stakeholders. To move forward, EWP projects also must be financially, legally, environmentally, and technically feasible, and developed within the strict time limitations associated with the EWP program.



**Restore. Revive. Renew.
Through Partnership**

SCHULTZ COMMUNITY RECOVERY

Corridor Status Information

EWP Projects on Deck



Lower Campbell Ditch

Campbell/Rope Arabian

The County's engineering consultants completed feasibility level engineering (approximately 15%) that specifically looked at conveying floodwater from the forest to the top of Campbell Avenue. This alignment was proposed at the Campbell/Rope Arabian corridor meeting last year and the County agreed to conduct the feasibility level engineering. Although very preliminary, this feasibility analysis also included an evaluation of any potential downstream adverse impacts. The preliminary analysis did not identify any adverse impacts. The County is now proceeding to a 30% level of engineering that will again assess the level of potential adverse impacts and will further evaluate the technical, legal and financial feasibility of the alignment. At the completion of the 30% level of engineering, a corridor meeting will be held.

Copeland

Surveying and 15 percent of the engineering for this corridor has been completed. After engineering for the Campbell/Rope Arabian corridor is completed, engineering of the Copeland corridor will proceed to the 30 percent level.

Lessons Learned from the First Set of EWP Projects

The County and its consultants have learned a few key lessons as we progressed through the engineering and pre-construction processes for the EWP Projects. We are now applying these lessons as we move forward with engineering and construction of other corridor projects.

A key lesson learned is the fact that those of us that have mortgages do not solely control decisions relative to our properties. Although property owners donated the area of their properties to provide the land for the flood mitigation, the banks (who mostly service your mortgage) and lenders (who actually hold the paper), such as Fannie Mae and Freddie Mac, must sign off on the provision of all easements affecting the property – this is called securing a mortgage release. This process is required for securing any form of easement, such as a road, public utility, or drainage easement.

Expediting the mortgage release process has proven to be very challenging. Major efforts have taken place to get the banks and lenders to understand the critical nature of these projects and how they will positively affect property values. Addressing these delays required us to mobilize significant pressure.

Most recently Representative Ann Kirkpatrick and her staff provided important support for securing the releases with the Wupatki Trails EWP project.

For future corridors, the County now realizes that this lengthy process will require the County to secure the easements needed several months prior to construction. Neither the Forest Service nor the NRCS will approve project construction unless the County has secured all the easements and mortgage releases. Therefore the County will need property owners in all future corridors to sign the easement documents earlier in the engineering process if construction is to remain on schedule.

The second key lesson learned is that the engineering/technical aspects of these projects is very complex and requires a great deal of time. This lesson really substantiates what we've known all along – this is an extremely complex and challenging and dynamic threat that the County, its partners, and the flood area residents are trying to address.

Evaluation of Potential Individual Lot Flood Mitigation Measures

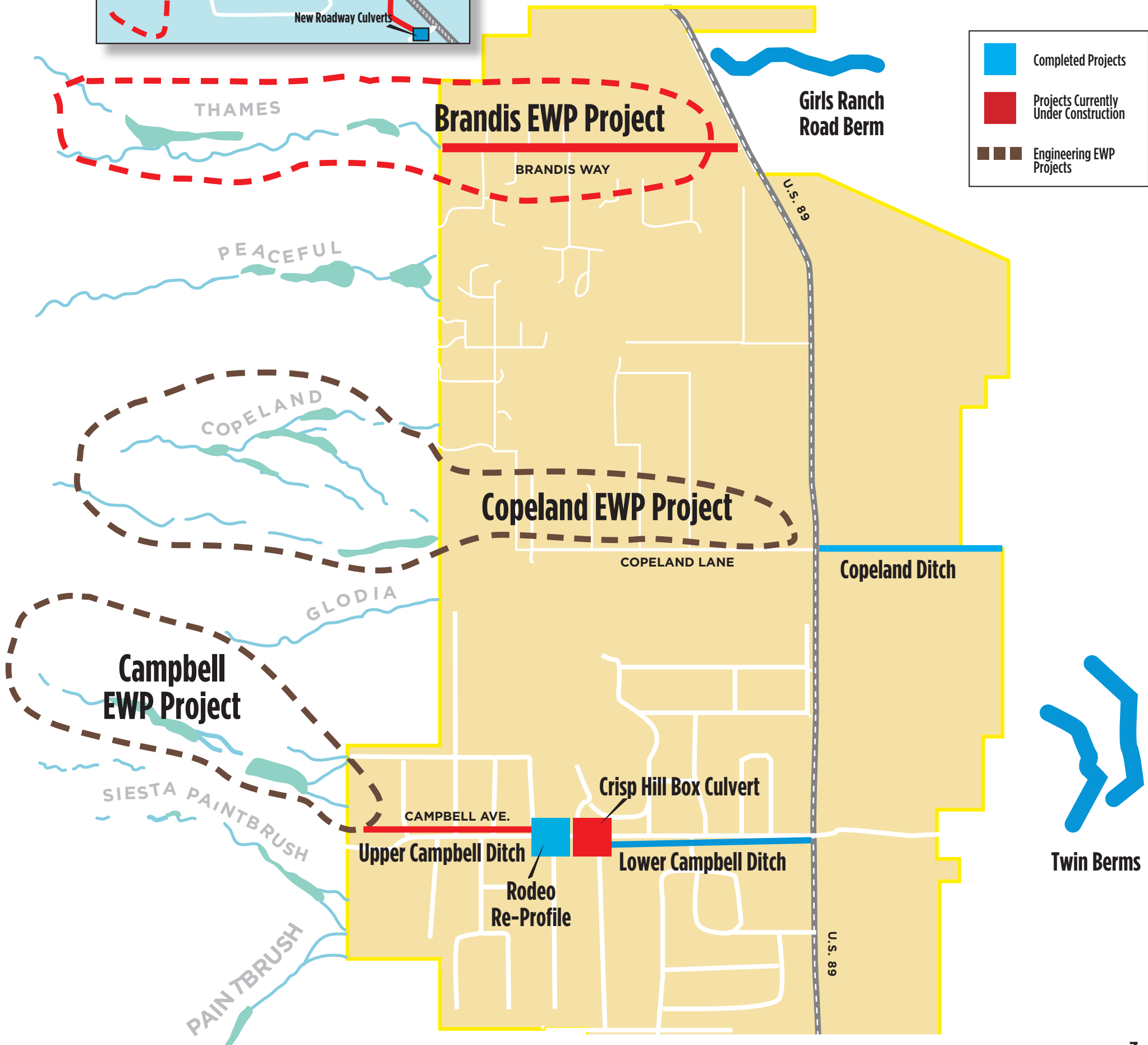
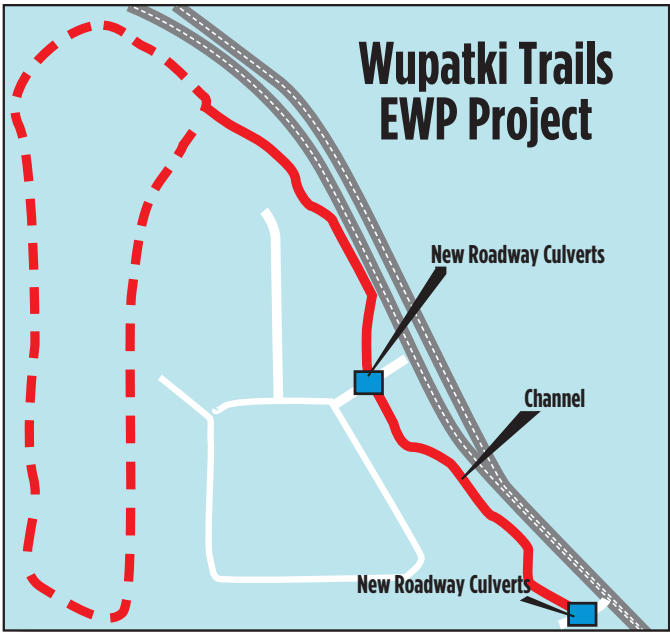
In the Schultz Flood area, flood mitigation is especially challenging because no two flood corridors are alike. Due to the feasibility issues encountered while developing channelized mitigation measures in flood corridors such as Paintbrush, the County is now planning to utilize a portion of EWP funding to better understand and evaluate potential individual lot flood mitigation measures. Working with a small set of property owners primarily in the Paintbrush corridor, a "template" of measures is being developed.

The goal is to first gain a better understanding about these measures and then meet with property owners in the Paintbrush, North Copeland and Peaceful Way corridors to provide them with information about the applicability associated with developing individual lot flood mitigation measures in areas where channels are not feasible or supported.

For More Corridor Information...

For current status updates on all of the Schultz Flood corridors, please visit the Schultz Flood "EWP Planning & Engineering" webpage at <http://www.coconino.az.gov/index.aspx?NID=888>.

Schultz Flood Mitigation Projects



Other Flood Mitigation & Drainage Projects Currently Under Construction

Crisp Hill Crossing Project

PROJECT INFORMATION
The Crisp Hill Crossing Project is designed to take floodwaters from the north side to the south side of Campbell Avenue. The project will utilize a box culvert running southeast under Campbell Avenue from the intersection of Campbell and Crisp Hill Road to convey floodwaters from the Upper Campbell Ditch to the Lower Campbell Ditch.

START DATE: April 8, 2013
TARGETED COMPLETION: July 5, 2013
PROJECT COST: \$820,000

Funding Entity: Coconino County Flood Control District (CCFCD)



For more information on these and other projects, please visit the Schultz Flood Webpage at <http://www.coconino.az.gov/index.aspx?NID=641>.



Sunset Crater Estates Drainage Improvement Project

PROJECT INFORMATION
The Sunset Crater Estates Drainage Improvement Project is intended to restore the localized drainage capacity of the Sunset Crater Estates neighborhood to historic conditions. Since the neighborhood was constructed in 1973, decades of roadway maintenance has resulted in conditions where the current roadway elevation is greater than that of adjacent private properties in some locations, thus reducing the ability of localized flows to reach historic drainage features.

The project consists of improving and reinforcing the drainage ditches along the north sides of Moonbeam Drive, Gemini Drive and Saturn Drive. In addition, new low water crossings and ditches route localized water flows to a new asphalt ditch on the west side of Stardust Trail.

START DATE: April 8, 2013
TARGETED COMPLETION: May 31, 2013
PROJECT COST: \$520,000

FUNDING ENTITIES:
• Coconino County Flood Control District (CCFCD)
• Federal Emergency Management Agency (FEMA)



Upper Campbell Ditch Stabilization Project

PROJECT INFORMATION
Located on Campbell Avenue between North Alice Drive and Crisp Hill Road, the Upper Campbell Ditch Stabilization Project improves the existing drainage ditch on the north side of Campbell Avenue. Enlarging and armoring this ditch will help stabilize the Upper Campbell Ditch and increase its floodwater conveyance capacity. This will provide additional protection for residences, private property, utilities, and Campbell Avenue.

START DATE: March 4, 2013
TARGETED COMPLETION: June 15, 2013
PROJECT COST: \$1 Million

Funding Entities:
• Coconino County Flood Control District (CCFCD)
• Arizona Department of Emergency Management (ADEM)
• Federal Emergency Management Agency's Hazard Mitigation Grant Program (FEMA HMGP)



EWP Spotlight: Brandis/Thames & Wupatki Trails Flood Mitigation Projects



Brandis/Thames EWP Flood Mitigation Project

START DATE:

March 28, 2013

TARGETED COMPLETION:

July 5, 2013

PROJECT COST:

\$3.6 million

FUNDING ENTITIES:

NRCS EWP Program and the County's Flood Control District

OTHER PROJECT PARTNERS:

- U.S. Forest Service
- Arizona Department of Environmental Quality
- Arizona Department of Transportation
- Arizona Public Service
- Century Link
- Doney Park Water
- Suddenlink
- Unisource
- AT&T



Restore. Revive. Renew.
Through Partnership

SCHULTZ COMMUNITY RECOVERY

Wupatki Trails/Lenox EWP Flood Mitigation Project

START DATE:

May 15, 2013

TARGETED COMPLETION:

July 2013

PROJECT COST:

\$900,000

FUNDING ENTITIES:

NRCS EWP Program and the County's Flood Control District

OTHER PROJECT PARTNERS:

- Arizona Department of Transportation
- U.S. Forest Service
- Arizona Public Service
- Doney Park Water



Restore. Revive. Renew.
Through Partnership

SCHULTZ COMMUNITY RECOVERY



Wupatki Trails/Lenox

Wupatki Trails Emergency Watershed Protection (EWP) Flood Mitigation project is the second EWP project to break ground in the Schultz Flood area. Funded by the Natural Resources Conservation Service's EWP Program and the Coconino County Flood Control District, the project is designed to reduce impact and provide additional safety for the neighborhood during and after typical monsoon storms.

Wupatki Trails is the northern most development in the the Schultz Flood area. The Wupatki Trails project resulted from ongoing cooperation between the County, NRCS, U.S. Forest Service and, most importantly, the support of the property owners who donated the necessary easements.

Designed to accommodate a five year, 24-hour storm event, both projects integrate

sediment reduction measures on Forest Service land with new floodwater channels that carry water through the neighborhoods. Working together, these flood mitigation measures are designed to significantly reduce sediment coming from the forest and stabilize existing flow paths.

For more information visit: <http://www.coconino.az.gov/index.aspx?NID=641>

Flood Mitigation Accomplishments of 2012



Lower Campbell Ditch

Lower Campbell Ditch Repair Project

Last summer, Coconino County completed an extensive construction project to repair the Lower Campbell Ditch, which was damaged during the major flooding that occurred in 2011. The County contracted with Tiffany Construction, a northern Arizona-based firm with experience constructing gabion-lined ditches, to complete the project. Gabion baskets, which were initially installed in 2011, are wired baskets filled with stones that are used to line ditches.

On Sept. 13, 2011, monsoon rainfall hit the 15,000-acre Schultz burn area and sections of the gabions lining the walls of the Lower Campbell Ditch failed where the ditch floor was not lined with concrete. At the time, the U.S. Army Corps of Engineers refused to allow the County to line the entire ditch floor with concrete. However, after several meetings involving high level Army Corps officials, the County received approval to repair the damaged ditch, including the installation of the concrete floor. The County contracted with Kimley-Horn & Associates, an engineering firm with extensive experience designing gabion-lined channels, to assess the damage and to engineer the repair project. KHA also confirmed that the original design, which included the concrete floor, was the appropriate design for the ditch.

Crews completed the repair project before the start of the 2012 monsoon season. After construction, the area was re-vegetated and a fence and safety signage was installed.

The project was funded by multiple sources, including the Coconino County Flood Control District, the Arizona Department of Emergency Management and the Federal Emergency Management Agency.

Reconstruction of the Girls Ranch Road Berm

The 2012 Girls Ranch Road Berm Stabilization project consisted of reconstructing a 2,400-foot long earthen berm running west to

east to the north of Forest Service Road 776 near U.S. 89. The original berm was constructed during the 2010 Schultz emergency response to protect homes downstream in Fernwood and Doney Park. This berm was formally engineered and reconstructed to provide additional flood mitigation for the neighborhoods east of U.S. 89, including Fernwood and Doney Park.



Rodeo Drive

By the Numbers (construction costs only)

Project Name	Year Completed	Funding Agency	Partner Agency Funding	Coconino County Flood Control District Funding	Total Project Cost
Engineering Studies (Hydraulics, Hydrology, Cinder Lakes Capacity, Sediment Transport)	2010/2011	FEMA/US Geological Survey/Arizona Division of Emergency Management/Coconino County Flood Control District	\$300,000	\$200,000	\$500,000
Mitigation Projects Engineering	2011-2013	FEMA/Arizona Division of Emergency Management/Natural Resources Conservation Service/Coconino County Flood Control District	\$800,000	\$200,000	\$1,000,000
Copeland Ditch	2011	Federal Highway Administration	\$1,200,000	\$0	\$1,200,000
Twin Berms	2011	U.S. Forest Service	\$325,000	\$0	\$325,000
Lower Campbell Ditch	2012	FEMA/Arizona Division of Emergency Management/Coconino County Flood Control District	\$1,200,000	\$800,000	\$2,000,000
Girls Ranch Road Berm	2012	Coconino Resource Advisory Council/Coconino County Flood Control District	\$150,000	\$150,000	\$300,000
Rodeo Drive Reprofile	2012	FEMA/Arizona Division of Emergency Management/Coconino County Flood Control District	\$150,000	\$150,000	\$300,000
Brandis/Thames Corridor	2013	Natural Resources Conservation Service/Coconino County Flood Control District	\$1,750,000	\$1,850,000	\$3,600,000
Wupatki Trails/Lenox Corridor	2013	Natural Resources Conservation Service/Coconino County Flood Control District	\$600,000	\$300,000	\$900,000
Upper Campbell Ditch (construction & repair)	2013	FEMA/Arizona Division of Emergency Management/Coconino County Flood Control District	\$750,000	\$250,000	\$1,000,000
Crisp Hill Box Culvert	2013	Coconino County Flood Control District	\$0	\$850,000	\$850,000
Totals			\$7,225,000	\$4,750,000	\$11,975,000

Rodeo Drive Re-Profiling

In fall of 2012, the County completed a flood mitigation project to re-profile Rodeo Drive at the intersection with Campbell Avenue. The Rodeo Drive Re-Profiling Project was necessary to help retain floodwater within the Campbell Avenue roadway and minimize the flow of water southward down Rodeo Drive. Although the project does not prevent all floodwaters from entering Rodeo Drive off of Campbell Avenue, the re-profiling has been engineered to manage the most frequent type of monsoon storm events in the Schultz Flood area. This project, in concert with the other projects now being constructed along Campbell Avenue, significantly reduces impacts to private property, the roadway and public utilities.

The County contracted with northern Arizona-based McCauley Construction for this month-long project. It was funded by the Coconino County Flood Control District and the Federal Emergency Management Agency.

This Monsoon Season, Staying Ahead of the Storm is as Easy as 1-2-3...

This monsoon season, Coconino County and the National Weather Service (NWS) are again committed to helping Schultz Flood area residents keep aware and informed about monsoon storms. Because these fast-moving storms can arrive with little or no warning, getting accurate weather and flood information as soon as possible is absolutely critical to your safety.

Following are three easy steps that will help to protect you, your family, and your property during monsoon season:

1. Get a Weather Radio for Storm Information.

A weather radio remains your best tool for obtaining vital NWS weather information about incoming monsoon storm events. Please make sure that yours is in good working order and that you have a supply of fresh batteries readily available.

2. Regularly Check the NWS Schultz Flood Area Weather Link.

Check for the most current weather information warnings, radar, and rain gauge data on the NWS "Schultz Flash Flood Decision Support Page": <http://www.wrh.noaa.gov/fgz/DSS/schultzalerts.php?wfo=fgz>

3. Use Social Media for Flood-Related Information.

For those with smart phones and PC's, social media is a great way to keep apprised of flood-related information and associated County response activities. In addition, new interactive social media services like e928 Emergency News Source allow users to track a developing monsoon story and also share their first-hand storm observations via Facebook and Twitter (for more information on e928, please see the feature story on the right side of this page).

We encourage everyone who uses social media to "Like" Coconino County and the National Weather Service on Facebook and to follow us on Twitter:

facebook

<https://www.facebook.com/CoconinoCounty>

[facebook.com/US.NationalWeatherService.Flagstaff.gov](https://www.facebook.com/US.NationalWeatherService.Flagstaff.gov)

twitter

<https://twitter.com/#!/coconinocounty>

twitter.com/nwsflagstaff



Weather Terminology — Understanding NWS Watches, Warnings, and Advisories

FLOOD/FLASH FLOOD WATCH is issued when there is a significantly greater chance of flooding for a specific day, but its occurrence, location, and/or timing is still uncertain. Usually are issued within 48 hours of the forecast flood event.

FLASH FLOOD WARNING is issued when flash flooding is occurring or is imminent. Individuals in the warned area should take immediate precautions to protect life and property.

SMALL STREAM FLOOD ADVISORY is issued for elevated river/stream flows, ponding of water in urban or other areas, and for flooding that is generally only an inconvenience (not life threatening) to those living in the affected area.

e928 Emergency News Source Provides Flagstaff with Emergency Alerts, News, and Information on Mobile

Spring 2013 marks the launch of the e928 Emergency News Source. This new mobile web service provides users with emergency alerts, news stories, multi-media updates, and relief information during local crises like severe wildfires, floods, and hazardous materials incidents.

e928 utilizes journalists and emergency officials to combine disaster relief information with social networks on a new website and mobile application. In addition to reporters and photographers from the Arizona Daily Sun and KNAU, designated "contributors" in the field will send eyewitness information to the web site, and editors will monitor Twitter feeds, Facebook pages and agency websites on an up-to-the minute basis. Video and maps will be used, and the e928 site will be interactive

– users can provide instant feedback that can help update the information.

The project's visionaries, KNAU Arizona Public Radio and the Arizona Daily Sun, began discussions more than a year ago to develop a way to tap the power of social media during emergencies without sacrificing accuracy. Today, thanks to a major grant from the Knight Foundation and working with the Flagstaff Community Foundation and the Coconino County Office of Emergency Management, this new online and mobile emergency news source is available to residents throughout Coconino County.

What distinguishes e928 is the Partners' unique ability to review or "curate" social media within the platform, helping to bridge the confidence gap between the abundance of social media and reliability of professional news. The project's founders believe that e928 has the potential to raise the credibility of both when it matters most.

For more information about the e928 Emergency News Source project, its partners, or to learn about becoming a Contributor or Partner, email us at info@e928.org.

Road Maintenance During Flooding Events

County Maintained Roads

Motor graders will be utilized to remove debris from County maintained roadways. The typical process for clearing roads after flooding events follows:

- One motor grader will remove debris from Campbell Avenue and all roads south of Campbell. Once these roads are secured, the grader will then clear the roads north of Campbell affected by flood waters.
- A second motor grader will remove debris from Copeland Avenue, then proceed to the roads north of Copeland, next to the roads south of Copeland, and then meet up with the Campbell motor grader to complete those roads north of Campbell.
- A third motor grader will focus on the Wupatki Trails subdivision and Brandis Road area.
- Additional equipment will be mobilized when conditions dictate for the Timberline, Fernwood, and Doney Park areas.
- Routes are subject to change depending upon flood events and resources available.

Private Roads

Private roads are not maintained by the County. However, after an emergency flood event, the County will make private roads open and passable. The County will not provide materials, do construction work or ditch maintenance on private roads.

Drainage Easements & Low Water Crossings

The County will make an effort to inspect and clean as necessary those drainage easements dedicated to the County. The County is unable to commit resources to clean drainage easements dedicated to the "public" or to Homeowners Associations.





5600 Commerce
Flagstaff, AZ 86004

PRSRT STD
U.S. Postage
PAID
Flagstaff, AZ
Permit 113



The County is creating a self-serve sandbag station to support residents in preparing for possible flooding during the 2013 monsoon season. UV protected sandbags and fill material will be available at the north end of the Silver Saddle Trading Post located at 9001 N. U.S. 89. Please be reasonable as to the number of bags you take for use.

Properly filling and constructing a sand bag wall is important. For more information on sandbag walls and other flood preparation resources, please visit the Schultz Flood Web Page at <http://www.coconino.az.gov/index.aspx?NID=641>

Resources

Schultz Flood Hotline(928) 679-8390 or (877) 679-8390
Schultz Flood Email..... schultzmitigation@coconino.az.gov
Schultz Flood Webpage..... <http://www.coconino.az.gov/index.aspx?NID=641>

National Weather Service – Schultz Flood Web Page
<http://www.wrh.noaa.gov/fgz/DSS/schultzalerts.php?wfo=fgz>

Summit Fire..... **Dial 911 in an Emergency**
(US 89)..... (928) 526-1724
(Koch Field Road/Main Office) (928) 526-9537
United States Forest Service Peaks Ranger District(928) 526-0866
Coconino County Humane Society(928) 526-1076
Second Chance Center for Animals (928) 526-5964
Cinder Lake Landfill(928) 527-1927
American Red Cross (928) 779-5494
UniSource Energy Services(928) 525-8103
Arizona Public Service (APS) (800) 253-9405
CenturyLink.....(800) 573-1311
Doney Park Water..... (928) 526-1080
SuddenLink Communications (928) 774-5336

For further information and additional resources in more detail:
www.readycoconino.az.gov • www.ready.gov • www.floodsmart.gov • www.fema.gov



United Way of Northern Arizona continues to coordinate efforts to provide flood area residents with assistance in preparing for the upcoming monsoon season.

We would like to thank United Way of Northern Arizona for organizing these important volunteer events and providing an opportunity for the broader community to assist their neighbors in the Schultz Flood area.



